Space Station and Payloads Processing
ISS-9A

S1 Integrated Truss Segement
3 HRS radiators, CETA Cart
S-Band Antenna

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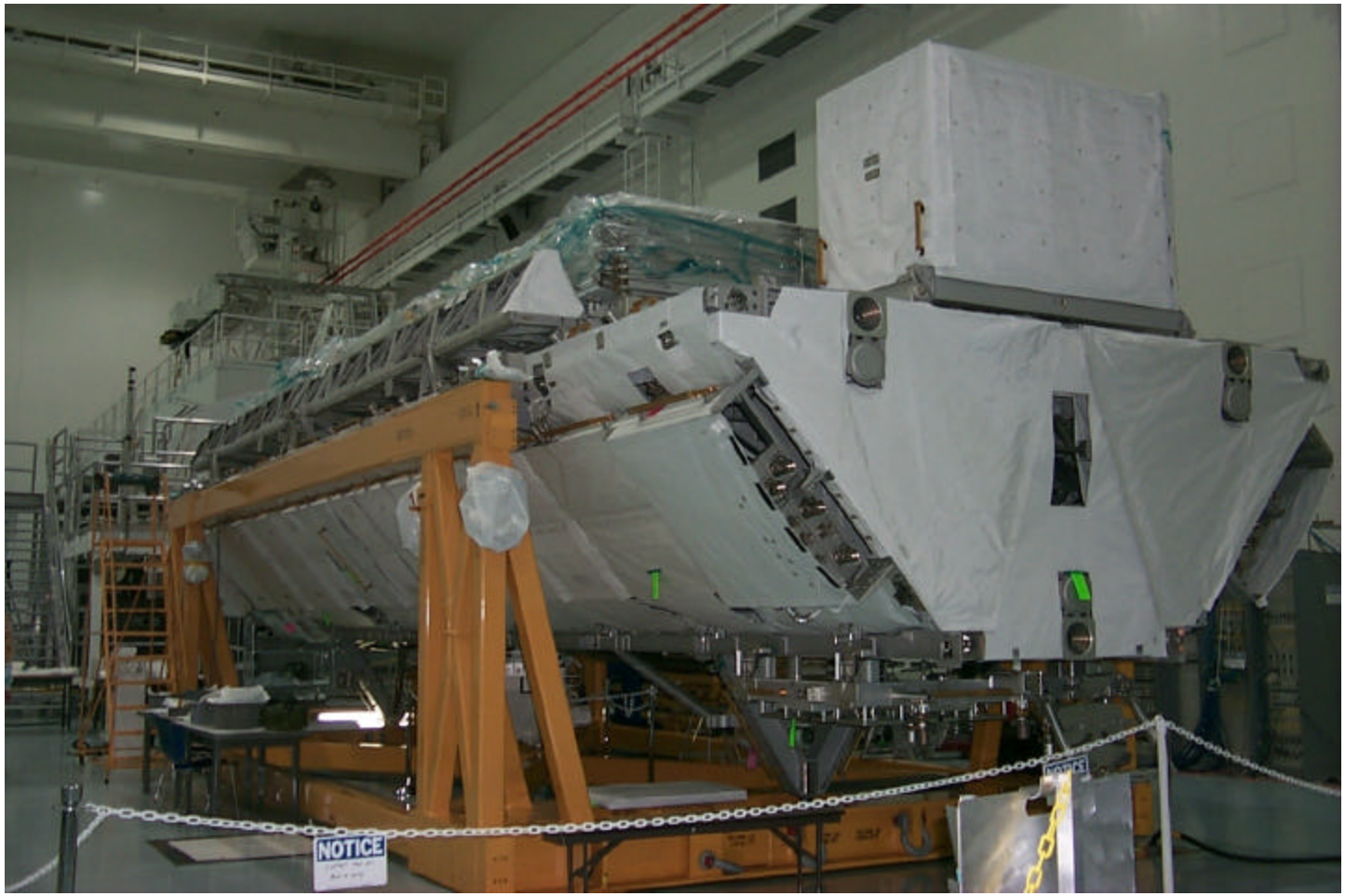
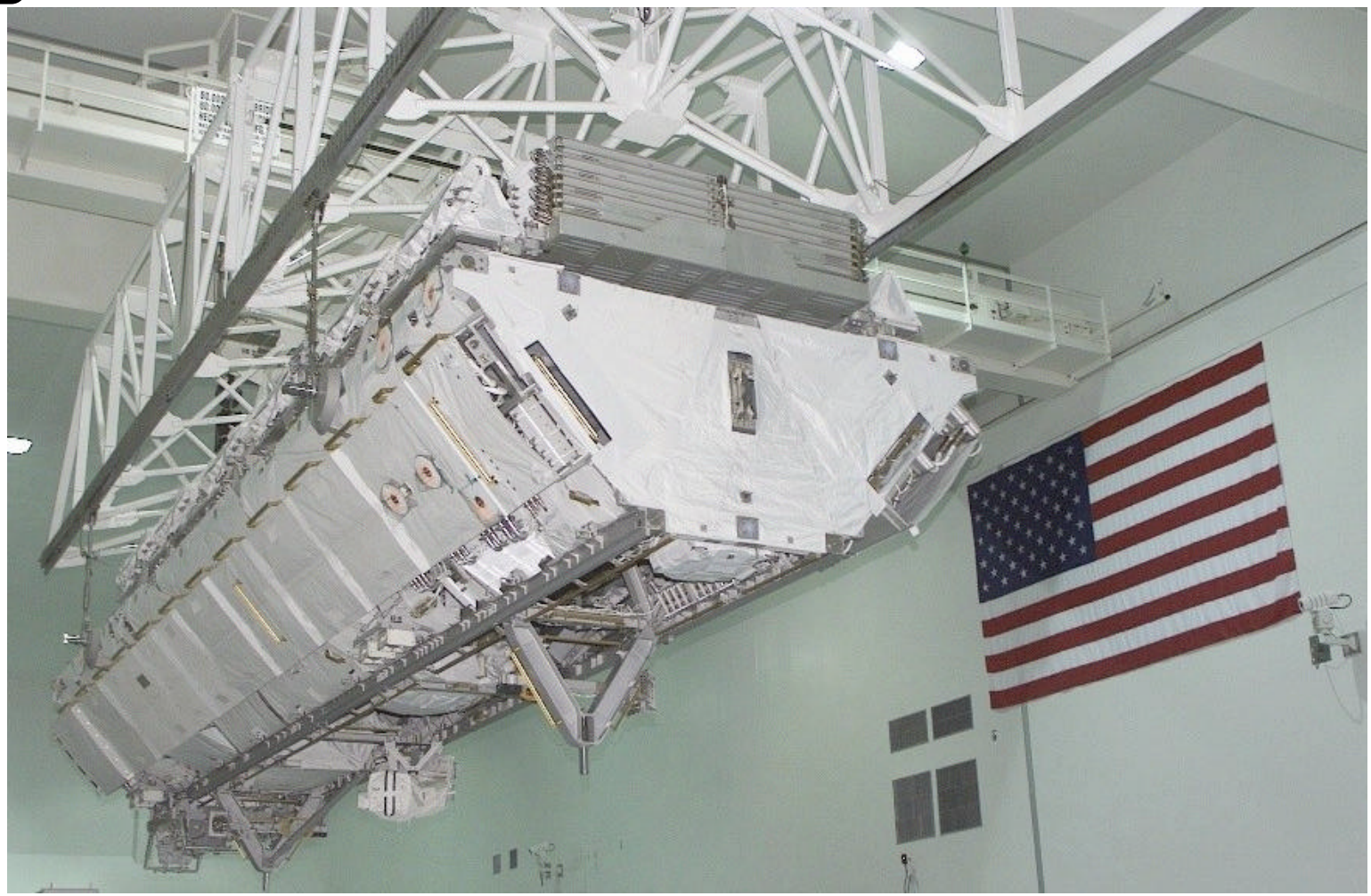
Agenda

• Hardware Images	To Be Briefed
• Processing Milestones	To Be Briefed
• Middeck Experiment Requirements	To Be Briefed
• Launch Delay Requirements	
◦ Middeck Experiments	To Be Briefed
◦ S1Truss	None
• Engineering Status	To Be Briefed
• Readiness Certification	To Be Briefed
• Acronyms	In Back-Up
• Master Milestone Schedule	In Back-Up

S1 – Nadir face



S1 Truss – Zenith Face



Payload Processing Milestones

S1 Truss

• Arrival at KSC (O&C)	06 October 1999
• Pre MEIT Assembly and Checkout	07 October 1999 – 09 May 2002
• MEIT 2	11 April 2001 – 24 June 2001
• ARB (DD250)	15 November 2001
• MEIT 2 Regression	04 March – 13 March 2002
• PSLIT	8 June – 10 June 2002
• Closeouts complete	27 June 2002
• Ready for shuttle integration	27 June 2002
• Payload to canister	27 August 2002
• Payload to pad	06 Sept 2002
• Installation into Orbiter	16 Sept 2002
• Shuttle Integration/Pad closeouts	06 Sept – 17 Sept 2002
• Final PLBD closure	17 Sept 2002
• Launch	02 Oct 2002

Middeck Experiment Requirements

Payload	Installation	IVT	Launch Delay Requirement	Post-Landing Destow
PCG-STES #7 [a,b,d]	</= 24 Hours	Yes	48 Hours	N/A (b)
PGBA[a]	</= 24 Hours	Yes	48 Hours	N/A
PGBA-S[a]	Nominal	No	7 Days	N/A
ZCG-SS3 [a]	</= 24 Hours	No	48 Hours	N/A
CGBA [a]	</= 24 Hours	Yes	48 Hours	N/A
BCSS Cryodewar (3)	<= 24 Hours	No	24 Hours	Runway
CGBA Samples	N/A	No	None	Runway
HRF Urine Tube Dispenser Assy (2) [c]	N/A	N/A	N/A	Runway
PCG-STES #8 [c, d]	N/A	N/A	N/A	Runway
ZCG-SS2 [c]	N/A	N/A	N/A	Runway
ADVASC-GC [c]	N/A	N/A	N/A	Runway
ADVASC Stowage 2&3 [c]	N/A	N/A	N/A	Runway
SHIMMER	Nominal	No	None	Nominal

Notes:

a. Ascent only; hardware to be transferred to ISS.
b. If payload is not transferred to ISS, powered runway destow is required.
c. Descent only; hardware is to be transferred from ISS.
d. During all handling (inside and outside Orbiter), personnel must wear ESD dissipative gloves.

Engineering Status

OMRSD/ACOMC

- No pending changes
- No open Waivers or Exceptions
- All remaining open requirements have been incorporated into the appropriate scheduled procedures for satisfaction

TRD

- No pending changes
- No open Waivers or Exceptions
- No open requirements

Copper Path

- No pending changes
- No open Waivers or Exceptions
- All requirements have been satisfied

Engineering Status

Nonconformances

- One Problem Report remains open as “Scheduled work” (PR-UT-PGBA-P001)
  - Video Failed OMRS requirement – ECD 24 Sept 2002
- All other Problem Reports have been closed or are in closure

Procedures

- All payload processing procedures have either been released or are scheduled to be released in time to meet all applicable “on the shelf” requirements

Launch Commit Criteria

- None

Certificate of flight readiness

- No exceptions

Readiness Statement

Pending completion of the planned forward work the KSC ISS / Payloads Processing Directorate is ready to proceed with the launch of ISS-9A/STS-112**.**

BACK-UP CHARTS

STS-112 ISS-15-09A - S1: 3 TCS RADIATORS, CETA CART A,S-BAND EQUIP

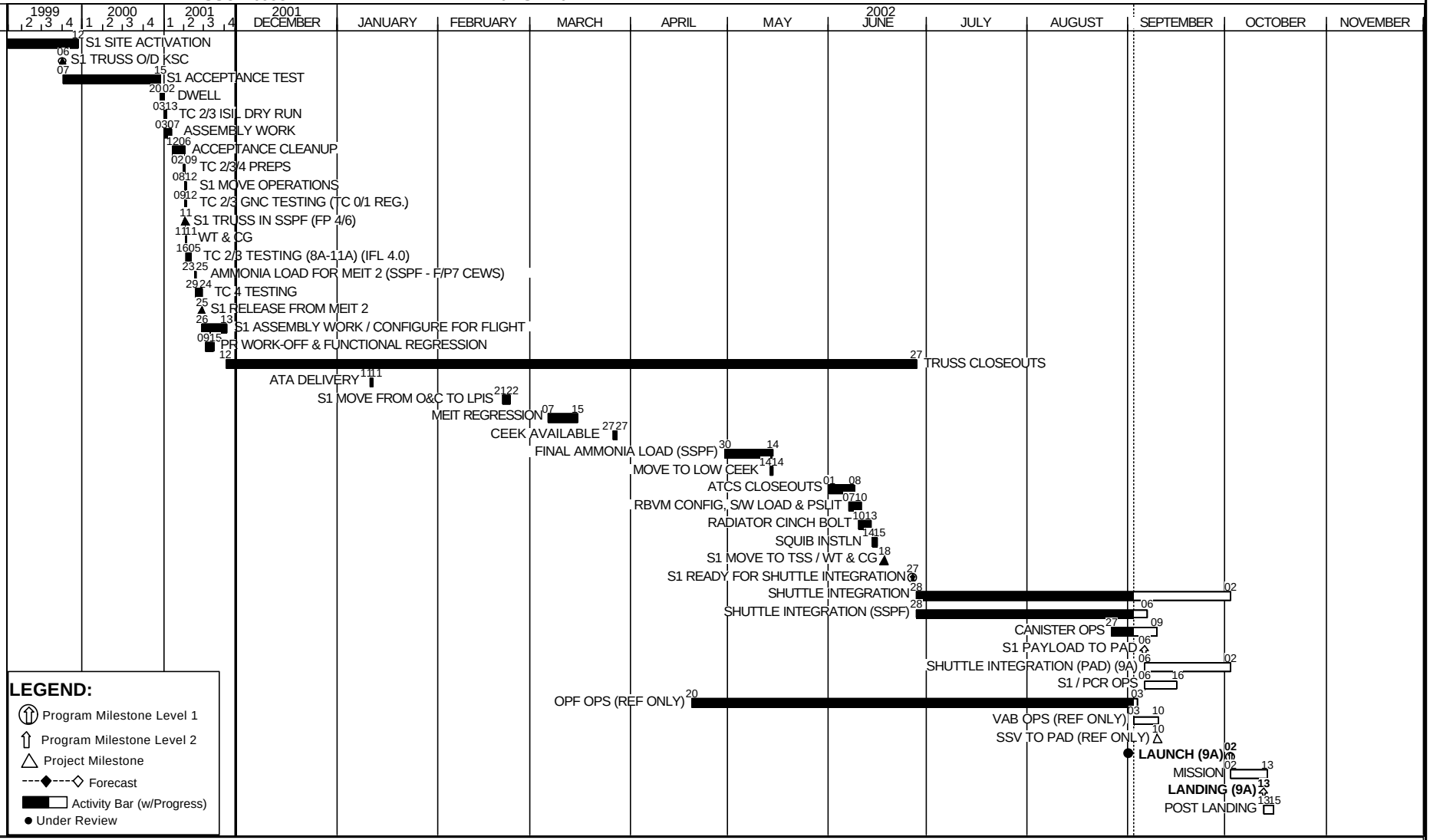
MASTER MILESTONE SCHEDULE

NASA: G. CALIENDO

OPF BAY: 2 PAD: A ORBITER: 104 Atlantis

BOEING : M. SMITH

MANIFEST: REV F-4 SSCN 6993 STATUS AS OF: 04 SEP 02 REV: X



THREATS: REFERENCE CR42013DJ

Open Requirements

OMRS NO	OMRS TITLE	WAD NO
P01000.010-B	EVA HAZARDS INSP - POST-INSTL	R6600
P01000.050	PAYLOAD CLOSEOUT INSPECTION	R59112
P1411AB.100	S1 GRAPPLE FIXTURE INSPECTION	R6600
P1411AB.200	S1 TRUNNION INSPECTION	R6600
P1411BB.200-B	S1 CONTAM - PRIOR TO ORB INST	E1012
P1411BB.200-C	S1 CONTAM - PRIOR TO FINAL PLB CLS	E1012
P1411DB.100	PAYLOAD BAY PERLAUNCH PURGE	S08112
P1411EB.100	PGBA DC POWER I/F	S0007 VOL 4
P1411ED.100	S1 TRUSS STATIC BOND	CM-4-26-029
P183EB.100	CGBA-ICM DC POWER I/F	S0007 VOL 4
U9035FT.010	VIDEO FUNCTIONAL I/F TEST	P11203
A-0009A-OCE-001	FINAL LAUNCH CONFIG. CHECKLIST	R58112
A-0009A-TIV-001.2	INBOARD TRUSS I/F VERIFICATION	BHB-TRUSS-S1-ELE-T139

Special Topic

- Problem Report PR003616 – Suspect contamination on S1 lanyards.
  - Oil residue from wire rope lanyard manufacturing appears to be leaching out over time.
  - Previous contamination found on both S1 and P1 CETA cart lanyards was cleaned per specification (PR003590 and PR003593)
  - New Contamination found on P1 keel lanyards has raised a concern with all lanyards manufactured by Avibank for station components.
  - Coordination complete with station and shuttle M & P engineering for a “use as is” rationale, and PR is closed. Shuttle to document condition on their own paper work system.

MEIT Unexplained Anomalies

- IPR SS-MEIT-02-TC23-0027
  - "Horizontal lines on LCD monitor…"
  - Unexplained Anomaly (UA) - MERB approved on 6 Mar 02
  - Closed

- IPR SS-MEIT-02-TC4R-0024
  - "P1 PMA Unexpected Shutdown"
  - Unexplained Anomaly (UA) - MERB approved on 1 Jul 02
  - Closed

- IPR SS-MEIT-02-TC4-0099
  - TRRJ pinion gear did not rotate when commanded (MDM Anomaly)
  - Unexplained Anomaly (UA) - MERB approved on 25 Jun 02
  - Closed

- **All Unexplained Anomalies have been dispositioned, reviewed, and approved by the appropriate Boards.**

Acronyms

- ARB - Acceptance Review Board
- ATA - Ammonia Tank Assembly
- ATCS - Active Thermal Control System
- CEEK - Cargo Element Extension Kit
- CETA - Crew Equipment Translation Aid
- CRF - Canister Rotation Facility
- HRS - Heat Rejection System
- IVT - Interface Verification Test
- LPIS - Launch Package Integration Stand
- MEIT - Multi Element Integration Test
- MSFC - Marshall Space Flight Center
- O&C - Operations and Checkout Building
- ORU - Orbital Replacement Unit
- PLBD - Payload Bay Door
- PSLIT - Post Software Load Initialization Test
- RBVM -Radiator Beam Valve Module
- SSPF - Space Station Processing Facility
- SPRT - System Problem Resolution Team
- TRRJ -Thermal Radiator Rotary Joint

Acronyms

- CGBA — Commercial Generic Bioprocessing Apparatus
- PCG-STES — Protein Crystal Growth Single Locker Thermal Enclosure System
- PGBA — Plant Generic Bioprocessing Apparatus
- ADVASC-GC — Advanced Astroculture – Growth Chamber
- BCSS — Biotechnology Cell Science Stowage
- HRF — Human Research Facility
- ZCG-SS — Zeolite Crystal Growth – Sample Stowage
- SHIMMER — Spatial Heterodyne Imager for Mesospheric Radicals